

**NEW DON PEDRO PROCEEDING**

**P-2299-024**

**SETTLEMENT AGREEMENT**

**1995**

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**SETTLEMENT AGREEMENT****1. INTRODUCTION**

This settlement proposes that Article 37 of the license for the New Don Pedro Project be amended to increase flows released from the New Don Pedro Dam. When this settlement is signed, it shall be binding on the parties to the settlement. The signature of the Federal Energy Regulatory Commission (FERC or Commission) staff represents a commitment by staff to recommend the settlement to the Commission for approval.

The settlement entered into by the participants is more comprehensive than the scope of Article 37; therefore, only the portion of the settlement that resolves the issues related to Article 37 will be filed for approval by the Commission. The proposed changes also affect the ongoing studies required by Article 58 which is also recommended for amendment. The material to be filed for Commission approval is described in Appendix A.

**2. LIST OF PARTICIPANTS:**

The following is a list of participants who support the settlement agreement:

California Department of Fish and Game (CDFG)  
California Sports Fishing Protection Alliance (CSPA)  
City and County of San Francisco (City)  
Federal Energy Regulatory Commission staff (FERC staff)  
Friends of the Tuolumne (FOTT)  
Modesto Irrigation District (MID)  
Tuolumne River Expeditions (TRE)  
Tuolumne River Preservation Trust (TRPT)  
Turlock Irrigation District (TID)  
U.S. Fish and Wildlife Service (FWS)

Signature of this settlement by a participant indicates that participant's consent to enter into this agreement. The San Francisco Bay Area Water Users Association contributed to the settlement discussions yet chose not to sign the agreement.

**3. EFFECTIVE DATE:** The participants intend that this settlement becomes effective upon signature of the participants. The participants acknowledge that the portion of the settlement filed for Commission approval is subject to ultimate approval by the Commission. No money is required to be transferred among the participants until 30 days after the date of issuance of an order by the Commission amending articles 37 and 58 of the license consistent with Appendix A.

4. **TERM OF THE SETTLEMENT:** The term of this settlement shall correspond with the term of the license.

5. **SUPPORT OF SETTLEMENT:** The participants agree to support this settlement.

6. **FILING OF SETTLEMENT WITH THE COMMISSION:** The participants to the settlement agree that the Districts will file the settlement agreement with the Commission in accordance with Rule 602 of the Commission's Regulations (18 CFR § 385.602), within 5 business days from the date the last participant listed in section 2 signs the settlement.

7. **COMMISSION ACTION:** If the Commission fails to act on the proposed amendment within 6 months from the date the signed settlement is filed with the Commission, or if the Commission amends the license in a manner that is substantially different than that proposed herein, CDFG, CSPA, City, FOTT, MID, TRE, TRPT, TID, and FWS reserve the right, at their own discretion, and within 30 days of the date of Commission action, to notify all other participants in writing that they are withdrawing from the settlement.

8. **STRATEGY FOR RECOVERY OF TUOLUMNE RIVER CHINOOK SALMON:** This recovery strategy attempts to: 1) increase naturally occurring salmon populations, 2) protect any remaining genetic distinction, and 3) increase salmon habitat in the Tuolumne River. Both instream flow and non-flow measures are employed as part of the strategy.

The participants to the settlement agree to the following strategy for recovery of Tuolumne River chinook salmon.

Implement measures generally agreed upon as necessary to improve chinook salmon habitat and increase salmon populations. These measures include increased flows, habitat rehabilitation and improvement, and measures to improve smolt survival. When the chinook salmon population increases to acceptable levels, implement additional measures of some risk that the Technical Advisory Committee (TAC) agrees may help improve the population.

The participants to the settlement agree to an adaptive management strategy that would initially employ measures considered feasible and have a high chance of success. The

success of these initial measures would be evaluated and, based on the results of evaluation, the measures would either be fine-tuned to improve success or alternative measures would be taken.

In support of this adaptive management strategy, a detailed review will be conducted annually to assess progress toward meeting the goals described in this settlement.

**9. GOALS AND TIMETABLE FOR ACHIEVING GOALS:** Many of the factors that will affect the chinook salmon population are beyond the control of the participants to the settlement. Rather than setting numeric goals in this settlement, comparative goals are identified whose attainment may be readily determined. These comparative goals are:

- Improvements in smolt survival and successful escapement in the Tuolumne River.
- Increase in naturally reproducing chinook salmon in this subbasin.
- Barring events outside the control of the participants to the settlement, by 2005 the salmon population should be at levels where there is some resiliency so that some of the management measures described herein may be tested, on an experimental basis.

**10. MEASURES TO BE TAKEN IF GOALS NOT ACHIEVED:** Assessment of achievement of the above goals will require an evaluation of trends established over several years. The participants agree that, given a good faith effort to implement the strategy for recovery of Tuolumne River chinook salmon, a fair assessment of the success of the strategy will require analysis of conditions from implementation to the year 2005. If the above goals are not achieved because of factors within the control of the Districts, or there has not been a good faith effort to fulfill the terms of this settlement, any participant may, at its own discretion, notify all other participants, in writing, that it is withdrawing from the settlement. Examples of factors within the control of the Districts include: New Don Pedro Dam operations (including decisions on the delivery, distribution, and transfer of water within and outside of the Districts) and river flows at LaGrange dam except during flood control operations, and land use activities on District-owned lands within the Tuolumne River riparian corridor. Examples of factors outside the control of the Districts include: Delta export operations, commercial and sport salmon harvest, land use activities on non-District owned lands within the Tuolumne River riparian corridor, and riparian diversions below LaGrange Dam.

In the event the goals are not achieved because of factors within the control of the Districts, the Districts agree to implement additional non-flow measures. The Districts, CDFG, and FWS will determine appropriate measures after reviewing recommendations from the TAC. In the event that goals are not achieved because of factors outside the control of the Districts, no additional measures would be required.

If a participant has a concern regarding fulfillment of the terms of this settlement, the participants agree to make a good faith effort to resolve any concerns. The participants agree to address the concerns at the TAC. If the concern is not resolved by the TAC, it will be addressed by the Management Committee in a timely manner.

11. **FISHERY FLOWS:** The Districts agree to maintain minimum streamflows in the Tuolumne River at La Grange bridge in accordance with the schedules set forth in this agreement or with such schedules as may be mutually agreed to among the Districts, CDFG, and FWS. The total volume of water allocated for a specific fish flow year shall not be less than that identified in the applicable Appendix A flow schedule. These schedules shall be available for public review at the Districts' offices.

By March 15 of each year, CDFG shall submit a preliminary fish flow schedule to the Districts and the FWS for review and comment. By April 10 of each year, CDFG shall submit a final fish flow schedule to the Districts for review and approval.

The water year type and corresponding flow volumes are listed below. Definition of the water year types and how flow volumes will be calculated from year to year are contained in the proposed amendment to article 37, attached as Appendix A.

<u>Water Year Type</u>	<u>Flow Volume</u> (acre-feet)
Critical Water Year and below	94,000
Median Critical Water Year	103,000
Intermediate C-D Water Year	117,016
Median Dry	127,507
Intermediate D-BN	142,502
Median Below Normal	165,002
Intermediate BN-AN	300,923
Median Above Normal	300,923
Intermediate AN-W	300,923
Median Wet/Maximum	300,923

In addition, the participants agree to work cooperatively in an effort to obtain additional flows in the Tuolumne River.

The participants will have fully complied with this cooperative effort to obtain additional flows by implementing, to the extent practicable, the following actions:

- The Districts and the City will seek permission from the Corps of Engineers to modify flood control rules in order to obtain greater flexibility in water releases from New Don Pedro reservoir. The Districts and the City agree to meet with the Corps within 2 months from the effective date of this agreement and to present a preliminary proposal to the Corps within 6 months thereafter. The Districts and the City agree to commit up to \$25,000 in support of the request to modify the flood control rule curve.
- The Districts will agree to make water transfers on mutually agreeable terms subject to the Districts' ability to free water from other committed uses.
- The Districts will provide an option to FWS and CDFG to purchase an amount of water cumulatively of up to 20% of any water to be sold by the Districts for diversion above New Don Pedro reservoir for municipal water supply. The sale price to the resource agencies will be no more than that paid by the transferee.
- The FWS will seek funds as appropriate, including Central Valley Project Improvement Act funds, for the purpose of purchasing water from the Districts, monitoring smolt production, and other measures agreed upon in this settlement agreement.
- TID will promote the proposed Turlock Area Drinking Water Project, the diversion for which is proposed to be located between river miles 19 and 26. The project will be implemented so that it will not be injurious to MID's water rights. FWS and CDFG agree to expedite the review of any permits and applications necessary for the drinking water project.
- TID will conduct a feasibility and cost analysis of withdrawing water for irrigation at the proposed Turlock Area Drinking Water Project diversion point. This analysis will be included in the EIR for that project. Based on the results of these analyses, CDFG and FWS will determine if it would be appropriate for them to fund or cost share in the design and construction of alternative irrigation diversion facilities. The parties to the settlement are under no obligation to fund the design, construction, operation, or maintenance of these facilities.



- The participants will work cooperatively through the TAC to achieve any efficiencies available through real-time management in an effort to conserve water deliveries in one year to increase incremental flows in the following year. To the extent that real-time management, in the judgement of the TAC, reduces the required minimum flow in one year, that water may be carried over for use in the following year and attributed to the efforts to achieve incremental flows; however, only 5,000 acre-feet may be carried over beyond October 1 of each year for use until the following October 1.

The water made available through the above measures will be provided as an increment above the minimum flows described above and will be scheduled as may be agreed to by the Districts, CDFG, and FWS except that flows to be diverted for the Tuolumne River Drinking Water Project will not be subject to such scheduling approvals. No water obtained and released pursuant to these measures shall be credited toward the calculation of minimum flow releases.

**12. NON-FLOW OPTIONS:** The parties agree that restoration and maintenance of Tuolumne River salmon habitat and reducing predation losses by isolating gravel ponds from the Tuolumne River channel would be beneficial. A program, overseen by the TAC and administered by the Districts, shall be implemented as follows:

a. The TAC shall determine whether to fund and complete a programmatic environmental document covering all spawning and rearing improvement and channel modifications (e.g. pond isolation projects) anticipated for the lower Tuolumne River, including those not funded through this agreement. Due to the likelihood of both federal and state matching or other funds for planning and implementation, a joint EIR/EIS (CEQA/NEPA) should be considered. Up to \$250,000 of the authorized funding under paragraph 12(g)(1) shall be provided for the completion of this document. If additional funds are needed, CDFG, FWS and other parties shall use their best efforts to locate and secure funds. The TAC will provide a recommendation regarding agency roles to the Management Committee for consideration.

b. The selection of priority non-flow options funded under this agreement shall be made by the TAC. The area between Old La Grange Bridge and the two riffles below Basso Bridge constitute the upper one-third segment of the Tuolumne River spawning reach.

This upper one-third segment is the most heavily used portion of the spawning area. Spawning habitats from Basso Bridge downstream to Waterford also receive significant use. There are several pond isolation projects on this reach that have good potential to reduce the recruitment and colonization of predator fish in the ponded sections of the river and restore a more natural river ecosystem. These ponded areas (created by in-channel aggregate mining) provide habitat for smallmouth and largemouth bass which prey on outmigrating chinook salmon smolts, significantly increasing smolt mortality.

c. The TAC will identify 10 priority projects. A minimum of two pond isolation projects will be included in the 10 priority projects. At completion of this phase, there will essentially be "turn key" projects ready for implementation. The objective is to implement the priority projects by 2005.

d. The methods used for implementation of these projects shall include, but not be limited to, simple gravel cleaning, hydraulic gravel cleaning, gravel replacement, gravel additions, ripping, re-contouring, barrier placements or removals, placement of object cover (boulders), restoring floodplain, land acquisition and riparian removal and replanting (e.g. shade). The design of the monitoring program will integrate closely with the timing, location and type of habitat improvement projects to assist in evaluating the merits of these projects.

e. Due to similar requirements for permitting, environmental documentation and implementation management, all other non-flow options will also be evaluated by the TAC in the manner described above. These measures include but are not limited to riparian restoration, land acquisition, sediment source control, predator control, enhancing turbidity during smolt outmigration, reduced poaching, fish screens, sound or behavioral devices to guide fish away from problem areas, livestock management (e.g. fencing, rotational grazing or compensating ranchers for not grazing riparian pastures). Upon recommendation from the TAC and approval by the Management Committee, projects such as these may be substituted for, or identified as part of the 10 priority projects described above, and funded as indicated. The parties agree to pursue outside funds and encourage others to complete these non-flow measures.

f. The Districts shall provide administrative services for these projects. Participants of the TAC shall participate at their own expense.

g. Funding

(1) The total amount of funds to be provided by Districts and the City for the cost of non-flow options shall not exceed \$500,000, except that up to an additional \$500,000 shall be provided to match, on a dollar-for-dollar basis, funds provided by other sources.

(2) Allowable project costs shall include development of the scope of work, preliminary and design engineering, permitting, environmental review, implementation work, preparation of required reports, and post-implementation monitoring incurred pursuant to a monitoring program approved by the TAC.

(3) The Districts will manage these funds in an efficient manner. CDFG and FWS will actively pursue funding from various sources to assist in completion of the 10 priority projects selected by the TAC. After completion of the 10 priority projects, any remaining funds shall be made available for designing or completing additional habitat projects identified by the TAC.

(4) The parties agree that nothing herein is intended to prevent any of the parties from seeking funds or financial assistance from third parties for the funding of non-flow options and the parties are encouraged to seek and to cooperate in obtaining such outside funding.

**13. MONITORING:** The 1986 Study Agreement shall terminate upon approval by the Commission of the amendment of articles 37 and 58 in accordance with the terms of this agreement. The following activities shall be completed pending Commission approval:

a. **Fluctuation Study:** GIS mapping of the river reach between river mile 26 and river mile 52 at river flows at approximately 1,100 cfs, 3,100 cfs, and 5,100 cfs and aerial photographs of the river flows at 5,100 cfs at an estimated total cost of \$50,000.

b. Juvenile seining study during 1995 at an estimated cost of \$20,000.

c. Temperature monitoring during 1995 at an estimated cost of \$5,000.

d. Smolt survival index study in spring 1995 at an estimated cost of \$50,000.

The fish program for the Tuolumne River shall shift its emphasis from studies to determine appropriate action, to implement and monitor the effectiveness of the fishery improvement measures described herein.

The Districts and the City will provide up to \$1,355,000 over the term of the license for funding monitoring costs. The Districts, with the cooperation of CDFG, FWS, and the City, will monitor the following:

#### Chinook Salmon Fall-Run

a. Spawning Escapement - The number, size distributions, scale or otolith samples for aging, timing, coded-wire tag recovery and decoding, and the linear distribution of redds in the designated salmon spawning area shall be estimated or collected annually from approximately October through mid-January. CDFG will perform the monitoring and use its best effort to fund this monitoring as a collaborative effort with the Districts for the first 10 years of this agreement. CDFG agrees to include funding for this monitoring in its proposed annual budgets and to seek approval of these budgets in good faith, however, the participants understand and agree that the Districts are responsible for this monitoring and that CDFG funding is subject to appropriations in the Governor's budget.

If CDFG cannot obtain funding for this monitoring for any given year during the first 10 years of this agreement, CDFG shall notify the TAC in writing by September 1 and the Districts will fund this monitoring. In these instances, the \$40,000 per year allocation for this monitoring shall be deducted from funds otherwise required to be paid by the Districts for monitoring performed under this agreement. After reviewing alternative funding options, the TAC shall recommend how the scope and extent of the monitoring in section 13 may be modified to adjust for any such funding deficit.

If, at the end of the first 10 years of this agreement, the CDFG finds that it is necessary and appropriate to continue monitoring spawning escapement for the remainder of this agreement, it will do so to the extent possible.

b. Quality and Condition of Spawning Habitat - The TAC will assign responsibility for developing a protocol to monitor the quality and relative condition of spawning riffles from La Grange downstream to Waterford. The

TAC will review the adequacy and validity of implementing this monitoring aspect in relation to the habitat improvement measures planned under this Agreement. The monitoring will be conducted by the Districts and will occur during four years before 2005 as scheduled and funded in Appendix A. CDFG and FWS will actively pursue additional monitoring funds for projects constructed in whole or in part by other funding.

c. Relative Fry Density/Female Spawners - Beach seine survey results over the past ten years for the Tuolumne River from old La Grange Bridge to Waterford shall be analyzed (by reach and by riffle) for the January 15 through March 15 time period (bi-weekly, monthly and season total) to define the range, median and mode, and variance of fry/100m<sup>2</sup>/female adult spawned in the reach. An assessment of the validity of using these "indices" or an alternate shall be completed by June 1996 by the TAC. Thereafter, monitoring shall occur during four years before 2005, as scheduled and funded in Appendix A. The purpose is to monitor changes in fry density/female spawner and evaluate the hypothesis that poor quality gravel is constraining salmon production on the Tuolumne River. Additional monitoring performed outside the terms of the Agreement will be summarized and evaluated in combination with these monitoring results by the TAC, when defining the phases approach to gravel restoration projects.

d. Fry Distribution and Survival (Fluctuation) - As a component of the "Flow Fluctuation" monitoring, field monitoring program(s) shall be funded to document the distribution and dislocation of salmon fry produced in the Tuolumne River as they move downstream in the Tuolumne River and San Joaquin River associated with flow fluctuations in late January, February, and early March. Multiple rotary screw traps and a mark and recapture program shall be established for four years during periods of large flow fluctuations within the spawning reach during the period January 15 - March 15 through 2005. A monitoring protocol shall be developed by the Districts and presented to the TAC for review and concurrence. If a pattern of high flows does prove effective in dislocating fry out of the Tuolumne River, the second phase (survival) of the monitoring program shall be designed and reviewed by the TAC and then implemented subject to available funding. The use of coded-wire tags or some other distinguishing mark will be needed to meet the objective of defining and survival rate/contribution rate of fry dislocated from the Tuolumne River associated with regulated flow

fluctuations. This monitoring shall be completed by the Districts and CDFG and be funded and scheduled as defined in Appendix A.

e. Juvenile Distribution and Temperature Relationship - The Districts shall perform and summarize beach seine survey results each year from March 15 - June 15, through 2005, to monitor the linear distribution of juvenile salmon. At least five thermographs will be deployed in the river. If determined necessary by the TAC, a weather station (air temps) will be deployed or local weather data during this same time period will be recorded. Fish and weather data will be summarized by the Districts annually. The monitoring will be funded and scheduled as defined in Appendix A.

f. Smolt Survival Indices - The CDFG will be funded to perform annual coded-wire tag monitoring of salmon smolt survival through 2005. A paired release of 150,000 to 200,000 CWT's total and a recovery effort (screw trap or trawl) will be performed each year that adequate numbers of hatchery fish are available.

In addition, a program of marking/tagging and replicate smolt release and recovery shall be funded annually through 2005 to monitor the relative effectiveness of the restoration measures in meeting the agreement goals. A protocol shall be prepared by CDFG and reviewed by the TAC prior to implementation. This monitoring program will be funded and scheduled as defined in Appendix A.

g. Smolt Production - The two monitoring procedures under the "Smolt Survival Indices" will provide extensive information on natural smolt outmigrants. The incremental addition of similar sampling effort (screw traps) extending before and after the CWT and mass marking releases can provide an index of smolt production. The TAC shall review methodologies and determine if this additional effort will result in significant results beneficial to monitoring the benefits of the restoration measures. This monitoring will be funded and scheduled as defined in Appendix A.

h. The TAC is authorized to modify the monitoring activities and studies specified in Section 13 (including, but not limited to, changes in the scope, protocols, number of years, and funding limits for an activity or study) so long as the total funding limit for monitoring is not exceeded.

14. **TECHNICAL ADVISORY COMMITTEE:** The above participants have established a valuable network of technical interaction and cooperation through the TAC. The Districts, FWS, CDFG, and the City agree to continue to exchange monitoring information for the Tuolumne and other subbasins so that progress in achieving the goals described herein may be evaluated.

Management Committee: The Management Committee is comprised of management representatives of MID, TID, CDFG, FWS, and the City. Their role is to oversee all TAC activities, to request and receive recommendations from the TAC, and to make policy decisions. The Management Committee will be responsible for resolving all issues elevated to it by the TAC. The Management Committee shall operate by consensus.

Under the direction of the Management Committee, the TAC will coordinate, by consensus, flow and non-flow measures for the fishery, monitoring activities, develop adaptive management strategies, and oversee their implementation. Any substantive disagreements among the TAC participants shall be elevated to the Management Committee for timely resolution.

The TAC members agree to continue to exchange information through the TAC. Exchange of information by all participants is encouraged and, to keep the exchange of technical information productive, any representative to the TAC should be a technical specialist in the aquatic sciences. Any party may send non-technical representatives to audit TAC meetings.

The TAC is not subject to the provisions of the Ralph M. Brown Act (California Government Code section 54950 et seq.); however, the TAC shall provide notices of and agendas for formal TAC meetings consistent with the requirements of the Ralph M. Brown Act. Attendees at any TAC meeting will be given an opportunity to comment on any TAC agenda item.

Resources Available to the TAC: The Districts agree to provide the administrative, clerical, and support facilities for the TAC to fulfill its tasks.

15. **REPORTING:** The Districts, CDFG, and FWS agree to report the above monitoring information and other data relevant to the condition of the fishery resources in the Tuolumne River to the TAC, in a timely manner, to facilitate basin fishery management practices. Timely dissemination of data concerning each of the above items will be necessary for the TAC to effectively implement adaptive management techniques.

The above monitoring information is also to be documented in annual reports, filed by April 1 of each year with the Commission and to be available for public review to further the understanding and management of the chinook salmon.

16. **FLOW FLUCTUATIONS:** The Districts agree to operate the New Don Pedro Project to minimize abrupt or daily flow fluctuations in the Tuolumne River during salmon spawning, incubation, and fry rearing (generally, October 16 through March 15 or other 150-day period as may be slightly modified by the TAC).

Specifically, the Districts agree to follow the guidelines described below unless modified by the TAC or because of circumstances beyond the control of the Districts.

From October 16 through March 15 of each year, the Districts agree to the following ramping rates for decreasing the indicated flows at La Grange.

<u>Flow (Q)</u> cfs	<u>Ramping Rate</u> cfs/hr
Q < 2,000	500
2,000 < Q < 2,700	700
2,700 < Q < 4,500	900

From October 16 through March 15, the Districts agree not to increase flows by more than 1,800 cfs per hour.

17. **TUOLUMNE RIVER FLOWS ABOVE NEW DON PEDRO RESERVOIR:** The City agrees to continue to work cooperatively with the organized and permitted recreational river users (rafters and kayakers) to schedule flows and to communicate daily flow schedules. If requested, the City will endeavor to inform the recreational river users of the amount of water it hopes to make available in the year for potential use by recreational river users. The parties agree that the amounts and schedule identified by the City will not be a legal obligation of the City, and further recognize that the City's obligation pursuant to the Raker Act or stipulations with the Department of the Interior are not increased or otherwise altered by this provision.

The Districts and the City agree to work with TRE to develop an understanding of the timing and amounts of flows needed by the recreational river users. TRE will provide the Districts and the City with its desired minimum flow volume and timing schedule. The City will, consistent with the above, attempt to provide the flows requested. The Districts and the City further agree to



explore opportunities to improve flows available for recreational river users above New Don Pedro Reservoir, which do not have adverse impacts on either the water or power operations of the Districts or the City.

**18. SUPPORT FOR ANCILLARY PROGRAMS:** The participants to the settlement agree to support the following ancillary programs. Those participants with permitting, licensing, or approval authority agree to work with the applicant to develop acceptable options and to expedite the review and approval process. All other participants agree not to oppose or delay the following:

- Turlock Area Drinking Water Project, the diversion for which is proposed to be located between river miles 19 and 26. The project will be implemented so that it will not be injurious to MID's water rights.
- Flows proposed herein before the California State Water Resources Control Board and the California Central Valley Regional Water Quality Control Board for achieving the goals stated in this settlement agreement.
- Regulation of the salmon harvest rates to achieve the goals stated herein.
- Promotion of the return of 3 and 4 year old female chinook salmon.
- Coordinated system operation within San Joaquin River basin.
- Increased storage in Turlock Lake.
- Review of cattle grazing on public land adjacent to Tuolumne River with the intent of developing protective measures for riparian habitat.
- Encouragement of appropriate agencies to monitor water quality and maintain water quality standards in the Tuolumne basin.
- Management of the Tuolumne River to promote the natural chinook salmon population.
- Maintenance of any increased flow in the Tuolumne River.
- Environmentally acceptable water transfers (subject to applicable water quality standards).
- Change in flood control rule curve to provide for greater storage for fish releases and to better accommodate recreational boating above New Don Pedro Reservoir.
- Coordinated actions to reduce impact on hydropower generation.

**19. RIPARIAN HABITAT AND RECREATION:** The participants to the settlement agree that the flows described herein will help to provide adequate protection and to enhance the existing riparian habitat along the Tuolumne River. Many factors, primarily related to land use, have resulted in a vegetative mosaic ranging from lush habitat to areas where the riparian habitat has been

denuded. The participants to the settlement agree that improving the downstream riparian habitat would not only benefit the chinook salmon population, but also the multipurpose use of the Tuolumne River.

Recreation enhances public appreciation of the river and broadens the economic base of the local communities. Recreational opportunities consistent with the protection and maintenance of the chinook salmon fishery should be promoted. Additional boating access would improve recreational opportunities.

The City agrees to provide \$500,000 to an appropriate public agency or agencies mutually acceptable to the City, FOTT, and TRPT. This funding would be used directly to implement riparian improvement measures, recreational facilities, for acquisition of other funds (matching funds), or as otherwise described herein. The money provided by the City will not be used to fund salary or overhead to anyone administering this fund. All costs charged to this fund must be documented and their expenditure subject to audit if requested by the City.

**20. CDFG STAFF POSITION:** The City agrees to provide CDFG \$70,000 a year for ten years to fund a fishery biologist position on the CDFG staff for the Tuolumne River. In addition, the City agrees to provide a one-time contribution of \$30,000 as start-up costs related to this staff position. The City and CDFG agree to work cooperatively to negotiate an appropriate funding agreement.

**21. FLOW ALLOCATION:** The Districts agree to release the fishery flows described herein. The allocation of that water between the Districts and the City will be shared as they have negotiated.

**22. COST SHARING BETWEEN THE DISTRICTS AND THE CITY:** The Districts and the City agree that costs for non-flow measures shall be shared as prescribed in the FOURTH AGREEMENT, unless otherwise negotiated.

**23. SECTION 7 CONSULTATION:** When a consensual agreement is reached, the participants will initial the settlement and FERC staff will immediately provide the agreement to FWS for consultation under Section 7 of the Endangered Species Act (ESA). FERC staff will identify the mediation participants as designated non-federal representatives for the purpose of assisting FERC and FWS in evaluating the effects of the settlement on any listed species.

Upon completion of ESA consultation, any consensual agreement will be signed by all participants.

**24. REQUESTS FOR EXTENSION OF TIME:** The participants agree not to request extensions of time for the requirements contained herein that are approved by the Commission, unless they have the concurrence of all participants to the settlement.

**25. MODIFICATION OF TERMS AND CONDITIONS OF SETTLEMENT:** Actions beyond the control of the participants may prevent or jeopardize a party's ability to fulfill a condition of the settlement. The participants to the settlement agree to work cooperatively to fulfill the terms and conditions of the settlement.

When a party to the settlement recognizes that it may have difficulty fulfilling a condition of the settlement, the affected party to the settlement agrees to notify, in writing, all other participants, as far in advance as possible, explaining the problem and requesting concurrence for an alternative schedule or an alternative activity to be performed by that party.


The participants to the settlement agree to respond within 30 days of the date of the initial letter with either their concurrence or a request for a meeting of the participants, to occur within 45 days from the date of the initial letter. Absent objection, the settlement will be amended as proposed.

If the participants to the settlement do not initially concur, the participants agree to meet and consider any alternatives presented. If they cannot concur on an alternative course of action, the party will be obligated, to the extent provided by law, to fulfill the original condition of the settlement.

**26. NON-PRECEDENTIAL NATURE OF SETTLEMENT:** Nothing in this settlement agreement, whether or not incorporated into the terms of the Commission license, is intended or shall be construed as a precedent or other basis for any argument that the parties which have signed this agreement have waived or compromised their rights which may be available under state or federal law except as to the matters addressed in this proceeding required by the Federal Power Act and in this settlement agreement. In addition, nothing in this settlement agreement establishes precedent regarding hydroelectric jurisdictional issues.

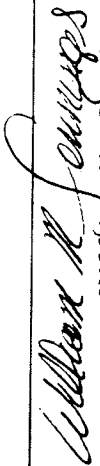
# NEW DON PEDRO PROCEEDING - SIGNATURE SHEET

The following signatures reflect agreement to the settlement.

Organization	Representative	Date
<i>California Department of Fish and Game</i>		<i>11/16/95</i>
<i>California Sports Fishing Protection Alliance</i>	_____	_____
<i>City and County of San Francisco</i>	_____	_____
<i>Federal Energy Regulatory Commission staff</i>	_____	_____
<i>Friends of the Tuolumne</i>	_____	_____
<i>Modesto Irrigation District</i>	_____	_____
<i>Tuolumne River Expeditions</i>	_____	_____
<i>Tuolumne River Preservation Trust</i>	_____	_____
<i>Turlock Irrigation District</i>	_____	_____
<i>U.S. Fish and Wildlife Service</i>	_____	_____


# NEW DON PEDRO PROCEEDING - SIGNATURE SHEET

The following signatures reflect agreement to the settlement.

Organization	Representative	Date
<i>California Department of Fish and Game</i>	 WILLIAM M. JENNINGS	11/16/95
<i>California Sports Fishing Protection Alliance</i>		
<i>City and County of San Francisco</i>		
<i>Federal Energy Regulatory Commission staff</i>		
<i>Friends of the Tuolumne</i>		
<i>Modesto Irrigation District</i>		
<i>Tuolumne River Expeditions</i>		
<i>Tuolumne River Preservation Trust</i>		
<i>Turlock Irrigation District</i>		
<i>U.S. Fish and Wildlife Service</i>		


# NEW DON PEDRO PROCEEDING - SIGNATURE SHEET

The following signatures reflect agreement to the settlement.

<i>Organization</i>	<i>Representative</i>	<i>Date</i>
<i>California Department of Fish and Game</i>	_____	_____
<i>California Sports Fishing Protection Alliance</i>	_____	_____
<i>City and County of San Francisco</i>		12/1/16
<i>Federal Energy Regulatory Commission staff</i>	_____	_____
<i>Friends of the Tuolumne</i>	_____	_____
<i>Modesto Irrigation District</i>	_____	_____
<i>{San Francisco Bay Area Water Users Association</i>	_____	_____
<i>Tuolumne River Expeditions</i>	_____	_____
<i>Tuolumne River Preservation Trust</i>	_____	_____
<i>Turlock Irrigation District</i>	_____	_____
<i>U.S. Fish and Wildlife Service</i>	_____	_____

# NEW DON PEDRO PROCEEDING - SIGNATURE SHEET

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Organization	Representative	Date
<i>California Department of Fish and Game</i>		
<i>California Sports Fishing Protection Alliance</i>		
<i>City and County of San Francisco</i>		
<i>Federal Energy Regulatory Commission staff</i>		
<i>Friends of the Tuolumne</i>	 Stephen Angile	1/24/96
<i>Modesto Irrigation District</i>		
<i>Tuolumne River Expeditions</i>		
<i>Tuolumne River Preservation Trust</i>		
<i>Turlock Irrigation District</i>		
<i>U.S. Fish and Wildlife Service</i>		

# NEW DON PEDRO PROCEEDING - SIGNATURE SHEET

The following signatures reflect agreement to the settlement.

Organization	Representative	Date
<i>California Department of Fish and Game</i>	_____	_____
<i>California Sports Fishing Protection Alliance</i>	_____	_____
<i>City and County of San Francisco</i>	_____	_____
<i>Federal Energy Regulatory Commission staff</i>	_____	_____
<i>Friends of the Tuolumne</i>	David M. Boucher, Chairman <i>David M. Boucher</i>	<i>11-5-95</i>
<i>Modesto Irrigation District</i>	_____	_____
<i>Tuolumne River Expeditions</i>	_____	_____
<i>Tuolumne River Preservation Trust</i>	_____	_____
<i>Turlock Irrigation District</i>	_____	_____
<i>U.S. Fish and Wildlife Service</i>	_____	_____



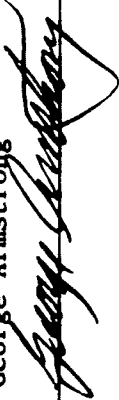

NEW DON PEDRO PROCEEDING - SIGNATURE SHEET

The following signatures reflect agreement to the settlement.

<i>Organization</i>	<i>Representative</i>	<i>Date</i>
<i>California Department of Fish and Game</i>	_____	_____
<i>California Sports Fishing Protection Alliance</i>	_____	_____
<i>City and County of San Francisco</i>	_____	_____
<i>Federal Energy Regulatory Commission staff</i>	_____	_____
<i>Friends of the Tuolumne</i>	_____	_____
<i>Modesto Irrigation District</i>	<i>Allen Short</i>	<i>1/27/96</i>
<i>[San Francisco Bay Area Water Users Association</i>	_____	_____
<i>Tuolumne River Expeditions</i>	_____	_____
<i>Tuolumne River Preservation Trust</i>	_____	_____
<i>Turlock Irrigation District</i>	_____	_____
<i>U.S. Fish and Wildlife Service</i>	_____	_____

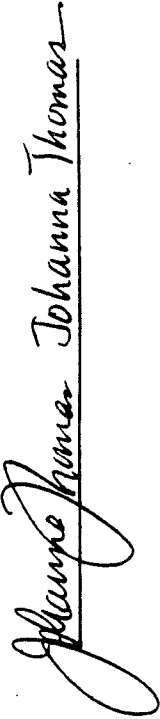
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<i>California Department of Fish and Game</i>	_____	_____
<i>California Sports Fishing Protection Alliance</i>	_____	_____
<i>City and County of San Francisco</i>	_____	_____
<i>Federal Energy Regulatory Commission staff</i>	_____	_____
<i>Friends of the Tuolumne</i>	_____	_____
<i>Modesto Irrigation District</i>	_____	_____
<i>Tuolumne River Expeditions</i>	George Armstrong 	
<i>Tuolumne River Preservation Trust</i>	_____	_____
<i>Turlock Irrigation District</i>	_____	_____
<i>U.S. Fish and Wildlife Service</i>	_____	_____

# NEW DON PEDRO PROCEEDING - SIGNATURE SHEET

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Organization	Representative	Date
California Department of Fish and Game	_____	_____
California Sports Fishing Protection Alliance	_____	_____
City and County of San Francisco	_____	_____
Federal Energy Regulatory Commission staff	_____	_____
Friends of the Tuolumne	_____	_____
Modesto Irrigation District	_____	_____
<del>San Francisco Bay Area Water Users Association</del>	_____	_____
Tuolumne River Expeditions	_____	_____
Tuolumne River Preservation Trust		11/9/95
Turlock Irrigation District	_____	_____
U.S. Fish and Wildlife Service	_____	_____

# NEW DON PEDRO PROCEEDING - SIGNATURE SHEET

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<i>Organization</i>	<i>Representative</i>	<i>Date</i>
<i>California Department of Fish and Game</i>	_____	_____
<i>California Sports Fishing Protection Alliance</i>	_____	_____
<i>City and County of San Francisco</i>	_____	_____
<i>Federal Energy Regulatory Commission staff</i>	_____	_____
<i>Friends of the Tuolumne</i>	_____	_____
<i>Modesto Irrigation District</i>	_____	_____
<i>Tuolumne River Expeditions</i>	_____	_____
<i>Tuolumne River Preservation Trust</i>	_____	_____
<i>Turlock Irrigation District</i>	_____	_____
<i>U.S. Fish and Wildlife Service</i>	_____	_____




Paul D. Elias, General Manager

1-23-96

# NEW DON PEDRO PROCEEDING - SIGNATURE SHEET

The following signatures reflect agreement to the settlement.

Organization	Representative	Date
California Department of Fish and Game	_____	_____
California Sports Fishing Protection Alliance	_____	_____
City and County of San Francisco	_____	_____
Federal Energy Regulatory Commission staff	_____	_____
Friends of the Tuolumne	_____	_____
Modesto Irrigation District	_____	_____
<del>San Francisco Bay Area Water Users Association</del>	_____	_____
Tuolumne River Expeditions	_____	_____
Tuolumne River Preservation Trust	_____	_____
Turlock Irrigation District	_____	_____
U.S. Fish and Wildlife Service	 WAYNE S. WHITE	11/13/95

# APPENDIX A

## APPENDIX A

## Proposed Amendment of Article 37

Article 37. The licensees shall maintain minimum streamflows in the Tuolumne River at La Grange bridge (river mile 50.5) for fish purposes in accordance with the table and schedules set forth below (or with such schedules as may be agreed to among the licensees, the California Department of Fish and Game and the U.S. Fish and Wildlife Service) Any such schedules shall be available for public review at the licensees' offices. These flows may be temporarily modified if required by operating emergencies beyond the control of the licensees.

## Water Year Classifications

Water Year Classification*	Cumulative Occurrence	Frequency %	60-20-20 Index (1906-1995)
Critical Water Year and below	< 6.4	6.4	<1500 TAF
Median Critical Water Year	6.4 - < 14.4	8.0	1500
Intermediate C-D Water Year	14.4 - < 20.5	6.1	2000
Median Dry	20.5 - < 31.3	10.8	2200
Intermediate D-BN	31.3 - < 40.4	9.1	2400
Median Below Normal	40.4 - < 50.7	10.3	2700
Intermediate BN-AN	50.7 - < 66.2	15.5	3100
Median Above Normal	66.2 - < 71.3	5.1	3100
Intermediate AN-W	71.3 - < 86.7	15.4	3100
Median Wet/Maximum	86.7 - 100	13.3	3100

\* The fish flow year is defined as April 15 through April 14 of the following year.  
The water year is defined as October 1 through September 30.

The water year classification shall be determined using the California State Water Resources Control Board's San Joaquin Basin 60-20-20 Water Supply Index and the California Department of Water Resources' (DWR) April 1 San Joaquin Valley unimpaired runoff forecast. The 60-20-20 index numbers used each year shall be updated to incorporate subsequent water years pursuant to standard DWR procedures so as to maintain approximately the same frequency distribution of water-year types. The volume of annual flow shall be periodically readjusted upon agreement among the licensees, the California Department of Fish and Game, and the U.S. Fish and Wildlife Service after April 1 of each year as more current unimpaired flow information becomes available.

Between a Median Critical Water Year and an Intermediate Below Normal-Above Normal Water Year, the precise volume of flow to be released by the licensees each fish flow year is to be determined using accepted methods of interpolation between index values given above.

**FLOW SCHEDULE**

Schedule	Occurrence	Days	Critical & below	Median Critical	Intermediate C-D	Median Dry	Intermediate D-BN	Median Below Normal	Intermediate BN-AN	Median Above Normal	Intermediate AN-W	Median Wet/Maximum
			6.4 %	8.0 %	6.1 %	10.8 %	9.1 %	10.3 %	15.5 %	5.1 %	15.4 %	13.3 %
	October 1 - October 15	15	100 cfs 2,975 ac-ft	100 cfs 2,975 ac-ft	150 cfs 4,463 ac-ft	150 cfs 4,463 ac-ft	180 cfs 5,355 ac-ft	200 cfs 5,950 ac-ft	300 cfs 8,926 ac-ft	300 cfs 8,926 ac-ft	300 cfs 8,926 ac-ft	300 cfs 8,926 ac-ft
	Attraction Pulse Flow		none	none	none	none	1,676 ac-ft	1,736 ac-ft	5,950 ac-ft	5,950 ac-ft	5,950 ac-ft	5,950 ac-ft
	October 16 - May 31	228	150 cfs 67,835 ac-ft	150 cfs 67,835 ac-ft	150 cfs 67,835 ac-ft	150 cfs 67,835 ac-ft	180 cfs 81,402 ac-ft	175 cfs 79,140 ac-ft	300 cfs 135,669 ac-ft	300 cfs 135,669 ac-ft	300 cfs 135,669 ac-ft	300 cfs 135,669 ac-ft
	Outmigration Pulse Flow		11,091 ac-ft	20,091 ac-ft	32,619 ac-ft	37,060 ac-ft	35,920 ac-ft	60,027 ac-ft	89,882 ac-ft	89,882 ac-ft	89,882 ac-ft	89,882 ac-ft
	June 1 - September 30	122	50 cfs 12,099 ac-ft	50 cfs 12,099 ac-ft	50 cfs 12,099 ac-ft	75 cfs 18,149 ac-ft	75 cfs 18,149 ac-ft	75 cfs 18,149 ac-ft	250 cfs 60,496 ac-ft	250 cfs 60,496 ac-ft	250 cfs 60,496 ac-ft	250 cfs 60,496 ac-ft
	Volume (ac-ft)	365	94,000	103,000	117,016	127,507	142,502	165,002	300,923	300,923	300,923	300,923



**Proposed Amendment of 1986 Agreement**

On February 2, 1987, the Commission issued an order amending the license for the New Don Pedro Project. Article 58 approved a fish study plan filed on November 11, 1986, and set as June 30, 1998, or two years after completion of the Smolt Survival Index Study, whichever is later, for filing the results of the fishery studies.

This settlement requires monitoring to determine the effectiveness of the measures proposed herein. The fishery studies approved on February 2, 1987, should be amended to switch the emphasis from studies to determine what actions may be appropriate, to monitoring to determine the effectiveness of the measures implemented by this settlement.

The results of any fishery study, already completed pursuant to the fish study plan and not already filed with the Commission, should be filed by April 1, 2005. Article 58 should be amended accordingly.

Article 58. The licensees, after consulting with the California Department of Fish and Game and the U.S. Fish and Wildlife Service, shall implement a program to monitor chinook salmon populations and habitat in the Tuolumne River. The monitoring program shall conform to the monitoring schedule set forth below and shall include:

- Spawning Escapement Estimates
- Quality and Condition of Spawning Habitat
- Relative Fry Density/Female Spawners
- Fry Distribution and Survival
- Juvenile Distribution and Temperature Relationships
- Smolt Survival

The monitoring frequencies and methods shall be agreeable among the licensees and the consulted agencies. Any disagreements regarding the conduct of these studies, not resolved among the licensees and consulted entities, shall be filed with the Commission for determination.

The above monitoring information is to be documented in annual reports which will be filed with the Commission by April 1 of each year and be available for public review. The results of any fishery studies, already completed and not yet filed with the Commission, shall be filed by the licensees by April 1, 2005.

**APPENDIX A  
MONITORING SCHEDULE**

<u>Item</u>	<u>Action Entity</u>	<u>Cost</u>	<u>Number of Years</u>	<u>Total Cost</u>	<u>Funding Source</u>
A. Monitoring Salmon Spawning Escapement	CDFG	\$ 40,000/year	10, possibly 20	\$400,000 possibly to \$800,000	CDFG
B. Monitoring Quality and Condition of Spawning Habitat	Districts	Base Year \$25,000 2nd Year \$10,000 3rd Year \$10,000 Final Year \$10,000	4	\$ 25,000 \$ 10,000 \$ 10,000 \$ 10,000	Districts, City
C. Monitoring Relative Fry Density/Female Spawners (Yrs Immediately following Item B)	Districts	\$ 25,000/year	4	\$100,000	Districts, City
D. Monitoring Fry Distribution and Survival (Jan. - Mar. flow fluctuations)	Districts/CDFG	\$ 50,000/year	4	\$200,000	Districts, City
E. Monitoring Juvenile Distribution and Temperature Relationships (Real-time Management)	Districts	\$ 25,000/year	10	\$250,000	Districts, City
F. Monitoring Smolt Survival (Real-time Management)	CDFG	\$ 75,000/year	10	\$750,000	Districts, City
G. Monitoring Smolt Production (Real-time Management)	TBD*	\$ 50,000/year	10	\$500,000	CVPIA**









\* To be determined by the TAC

\*\* The FWS agrees to seek external funding for this activity from various programs, including CVPIA.

## **APPENDIX B**

# NEW DON PEDRO PROCEEDING - LIST OF INITIALS

The following initials reflect agreement to the settlement prior to Endangered Species Act consultation.

Organization	Representative	Date
✓ California Department of Fish and Game		<u>4/23/95</u>
✓ California Sports Fishing Protection Alliance		
✓ City and County of San Francisco		<u>4/23/95</u>
Federal Energy Regulatory Commission staff		<u>23 April 95</u>
✓ Friends of the Tuolumne		<u>4/23/95</u>
✓ Modesto Irrigation District		<u>4-23-95</u>
✓ San Francisco Bay Area Water Users Association		
✓ Tuolumne River Expeditions		<u>4/23/95</u>
✓ Tuolumne River Preservation Trust		<u>4/23/95</u>
Turlock Irrigation District		<u>4/23/95</u>
U.S. Fish and Wildlife Service		